

TROPICAL BONT TICK

PROGRAM PROFILE

Goal	To prevent the introduction of the tropical bont tick (TBT), <u>Amblyomma variegatum</u> , and the associated disease of heartwater into the livestock industry and wildlife populations of United States from infested Caribbean Islands.
Enabling Legislation	Authority for this program is provided for under the 21 USC 114, PL 80-8, Act of February 28, 1947.
Economic Significance	<p>The TBT is a vector of the causative agent of heartwater disease in ruminants and is also associated with increased incidence of bacterial skin infections. If TBT were allowed to spread throughout its potential range in the Western Hemisphere, resulting losses from the tick and associated diseases would approach \$761.9 million annually. Previously unexposed populations are highly susceptible with estimated losses exceeding 50 percent in exposed cattle, and 80 to 90 percent in sheep and goats. Annual meat and milk production could be reduced up to \$722 million, and producers could incur increased costs for tick control, totaling about \$39.9 million. Reduced production of cow's milk would account for about 85 percent of losses.</p> <p>Eradication of the TBT vector while restricted to the Caribbean provides the best security to the Americas and reduces the risk that imported animals are infected with heartwater. An eradication program in U.S. territories or the mainland would be more difficult and expensive and could seriously endanger our cattle industry. Infestation of American mainland wildlife by heartwater would cause a permanent endemic presence. Eradication of heartwater, once introduced to the American mainland, would be unlikely since it would require depopulation of all infested wildlife hosts. According to USDA estimates, animal imports are expected to grow about 4 percent annually until FY 2005.</p>

Principal Approach and Methods Used to Achieve Goals The Caribbean Amblyomma Program (CAP), established in 1995, focuses on a regional approach to eradicating TBT and preventing the introduction of heartwater into the livestock industry and wildlife populations of the United States from infested Caribbean islands where it is currently established on 16 islands.

APHIS collaborates with the Food and Agriculture Organization of the United Nations (FAO), the Inter-American Institute for Cooperation on Agriculture (IICA), and the Economic Community of Caribbean Countries, as part of regional efforts to control the spread of the tick and eradicate it from the Caribbean. APHIS' role in the cooperative program is to provide technical expertise, program guidance, and funding through cooperative agreements.

Each island in the program conducts a preparatory phase which includes surveys, the purchase of necessary equipment and supplies, training, and information campaigns. In the eradication phase, host animals are treated at biweekly intervals for approximately 30 months. Livestock owners receive monitored amounts of pesticide and treat their own animals.

History

A joint European Union (EU) and Caribbean Community conference held in 1991 recommended a regional program for surveillance and eradication of TBT. The Food and Agriculture Organization of the United Nations took the lead and developed a cooperative plan for TBT eradication in the Caribbean. The National Cattleman's Association passed a resolution in 1991 supporting the direct involvement of APHIS in eradicating TBT from the Caribbean.

In September 1994, APHIS and IICA, a regional agricultural organization, entered into a cooperative agreement to conduct surveys to determine the distribution of the tropical bont tick infestation in the Caribbean. IICA conducts surveillance activities in the Dominican Republic, Anegada, Tortola, Virgin Gorda, St. Vincent and the Grenadines, Grenada, and Trinidad and Tobago. APHIS, through Veterinary Services, will be responsible for TBT

activities in Puerto Rico and the U.S. Territories. During fiscal year 1994, \$350,000 was released from the contingency fund to initiate APHIS' participation in the tropical bont tick program.

Local Cooperation

This is a 7-year cooperative plan with the EUN, Caribbean governments, and donors such as APHIS. Total program costs for are estimated to be \$30.5 million. Local Caribbean governments are expected to provide about \$10 million in cash and in-kind contributions. FAO and IICA are expected to provide approximately \$3 million. APHIS participation should total \$2.5 million. The EU will fund Tropical Bont Tick eradication on the Islands of the French Overseas Department where France insists on operating independently of the Regional Amblyomma Eradication Program. These French Islands of Martinique, Guadeloupe, Marie- Galante, and St. Martin equal about 60 percent of the region-wide project. As of FY 1999, all infested islands have been incorporated into the program.

Involvement of Other Agencies

None.

RESOURCE DATA

-----Obligations-----					
	<u>Direct</u>	<u>Reimbursement</u>	<u>User Fees</u>	<u>Staff-Years</u>	
FY 1994	--	--	--	--	
FY 1995	521,901	--	--	3	
FY 1996	453,185	--	--	3	
FY 1997	469,192	--	--	3	
FY 1998	456,207	--	--	1	
FY 1999 (est.)	407,000	--	--	1	
FY 2000 (est.)	407,000	--	--	1	
	<u>APHIS</u>	<u>Coop</u>	<u>Contingency Fund</u>	<u>CCC</u>	<u>Total</u>
Cum. (FY 98)	\$1,900,485	--	\$350,000	--	\$2,250,485

RECENT ACCOMPLISHMENTS

Tropical Bont Tick/3

Regional Cooperation

The TBT program is a cooperative effort between APHIS and other international organizations including the Food and Agriculture Organization of the United Nations (FAO), the Inter-American Institute for Cooperation on Agriculture (IICA), European Community, Caribbean governments, and other participants.

Until FY 1999, TBT-infected islands belonging to France followed a control programs instead of eradication, believing that TBT could not be eradicated. The success of the CAP program, together with favorable independent reviews, convinced the French territories to switch to a strategy of TBT eradication.

Program Timeline

Due to the continued decline of available funding, the program will be extended by two years. Further funding reductions would require redefining program goals to control or containment rather than complete eradication.

Recent Activities

Preparatory activities started in Anguilla in June 1995, St. Kitts and Nevis in October 1995, and Montserrat in February 1996. Within these islands, biweekly treatments with acaricides are given to 73 percent of the animals on Anguilla, 68 percent of the animals on St. Kitts, and 96 percent of the animals on Nevis. As eradication progresses, the percentage of animals treated should increase and tick populations should decrease.

In FY 1998, APHIS provided technical expertise, program input, and funding through the Food and Agriculture Organization (FAO). The FAO also contributed an additional \$1.9 million to the CAP program to support the purchase of acaricides and other critical needs.

Antigua

In FY 1998, eradication activities continued in Antigua which is infested with both the disease heartwater and a severe infestation of TBT. Antigua has a significant livestock population relative to neighboring islands and is a critical participant in the control of the tropical bont tick due to the historic presence of heartwater on the Island.

Anguilla

The eradication activities started in Anguilla in June 1995. In June 1997, the program stopped funding eradication activities on Anguilla because it had not been made adequate progress. In October 1997, eradication was suspended. Because of hot and dry conditions on this island, together with eradication activities on surrounding islands, the tropical bont tick population should not increase rapidly. Anguilla is not known to be infested with the disease heartwater. The focus of effort will shift to other islands this fiscal year to more directly reach the program goal of heartwater eradication.

Montserrat

Treatments have been limited on Montserrat due to volcanic activity forcing the program to shift from an eradication mode to a surveillance mode. Volcanic dust has had a negative effect on the tick population; no ticks have been found on the animal remaining on the island since the eruption began.

St. Kitts and Nevis

Biweekly treatments with acaricides are applied to 100 percent of the animals on St. Kitts, and 76 percent of the animals on Nevis. The reduction in the percent treated on Nevis is due to a 30 percent increase in the livestock population made possible by the success of the program on this island. The island of St. Kitts will become the first island to petition for TBT-free status. Post-eradication surveillance will follow for one year after an on-site review of St. Kitts confirms that TBT is eradicated.